a first gas supply section provided in the container, for supplying processing gas into the processing chamber, the processing gas forming thin film on the target object mounted on the mounting table;

B1 cent a movable clamp for clamping an edge portion of the target object and holding the target object on the mounting table;

a second heating apparatus formed separately from the clamp and arranged opposite the clamp, for heating the clamp;

a gas flow path formed between the clamp and the second heating apparatus when the clamp is moved to a position where the clamp clamps the target object; and

a second gas supply section for causing backside gas to flow into the gas flow path.

8. (Once Amended) The film deposition apparatus according to claim 1, wherein the thin film is formed of a high-melting-point metal film layer.